

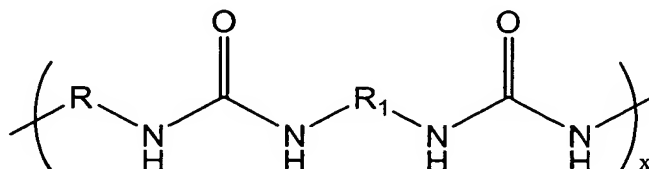
THE CLAIMS

What is claimed is:

- 5 1. A golf ball comprising a core and a cover, wherein at least one layer comprises a composition comprising at least one trifunctional material, wherein the composition has a crosslink density of about 0.2 or greater.
2. The golf ball of claim 1, wherein the at least one trifunctional material is selected
10 from the group consisting of a trifunctional isocyanate, a trifunctional polyol, a trifunctional amine-terminated component, a trifunctional hydroxy-terminated curing agent, a trifunctional amine-terminated curing agent, a trifunctional isocyanurate, and combinations thereof.
3. The golf ball of claim 1, wherein the crosslink density is about 0.5 or greater.
- 15 4. The golf ball of claim 1, wherein the crosslink density is about 0.8 or greater.
5. The golf ball of claim 1, wherein the composition comprises a polyurea prepolymer and a curing agent.
- 20 6. The golf ball of claim 5, wherein the polyurea prepolymer comprises the at least one trifunctional material.
7. The golf ball of claim 5, wherein the curing agent comprises the at least one
25 trifunctional material.
8. The golf ball of claim 1, wherein the composition comprises a polyurethane prepolymer and a curing agent.
- 30 9. A golf ball comprising a core, an inner cover layer, and an outer cover layer, wherein the outer cover layer is formed of a composition comprising:
a polyurea prepolymer, wherein the polyurea prepolymer comprises an
isocyanate and an amine-terminated compound; and
a curing agent,

wherein at least one of the isocyanate, amine-terminated compound, or curing agent has three functional groups, and wherein the composition has a crosslink density of about 0.2 or greater.

- 5 9. The golf ball of claim 9, wherein the composition comprises linkages having the general formula:

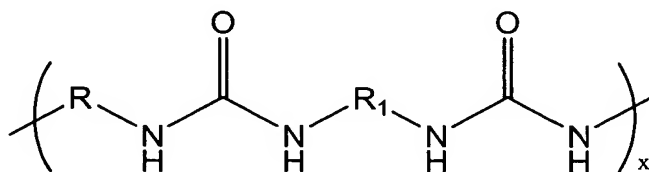


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wherein x is the chain length, wherein R₁ comprises a straight chain or branched hydrocarbon chain having about 1 to about 20 carbons, a polyether chain, a polyester chain, a polycaprolactone chain, or polycarbonate chain, and wherein R comprises aliphatic, aromatic, or araliphatic hydrocarbons.

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10. The golf ball of claim 9, wherein the composition consists of linkages having the general formula:



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wherein x is the chain length, wherein R₁ comprises a straight chain or branched hydrocarbon chain having about 1 to about 20 carbons, a polyether chain, a polyester chain, a polycaprolactone chain, or polycarbonate chain, and wherein R comprises aliphatic, aromatic, or araliphatic hydrocarbons.

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11. The golf ball of claim 9, wherein the composition comprises at least one of a trifunctional isocyanate, a trifunctional polyol, a trifunctional amine-terminated component, a

trifunctional hydroxy-terminated curing agent, a trifunctional amine-terminated curing agent, a trifunctional isocyanurate, or combinations thereof.

12. The golf ball of claim 9, wherein the crosslink density is about 0.5 or greater.

13. The golf ball of claim 12, wherein the crosslink density is about 0.8 or greater.

14. A chemical composition for golf balls comprising:

a polyurethane prepolymer comprising an isocyanate and a polyol; and
a curing agent,

wherein at least one of the isocyanate, polyol, or curing agent comprises three functional groups, and wherein the composition has an average molecular weight between crosslinks of about 3000 or greater.

15. The chemical composition of claim 14, wherein the average molecular weight between crosslinks is about 4000 or greater.

16. The chemical composition of claim 14, wherein the composition comprises at least one trifunctional component selected from the group consisting of a trifunctional isocyanate, a trifunctional polyol, a trifunctional amine-terminated component, a trifunctional hydroxy-terminated curing agent, a trifunctional amine-terminated curing agent, a trifunctional isocyanurate, and combinations thereof.

17. The chemical composition of claim 16, wherein the isocyanate is selected from the group consisting of an isocyanurate trimer of hexamethylene diisocyanate, an isocyanurate trimer of toluene diisocyanate, an isocyanurate trimer of isophorone diisocyanate, a blend of isophorone diisocyanate and an isocyanurate trimer of isophorone diisocyanate, and mixtures thereof.

18. The chemical composition of claim 14, wherein the composition has at least one of a COR profile that exhibits an increase as temperature decreases from about 70°F to about 20°F, a tan δ profile that exhibits a decrease as temperature decreases from about 70°F to about 20°F, or both.